

Nucleonica comments
28/06/2007

Free access comments:

Searchable Database:

- 1) Remove the first tab level (Database/Forum) – as in previous versions (see fig)
- 2) Change logo to a small chart picture (see fig)
- 3) Replace “Nucleonica Search” by “Nuclear Data Retrieval”

The screenshot displays the Nucleonica web application interface. At the top, a blue header bar contains the 'nucleonica' logo and the tagline '... web driven nuclear science'. Below this is a navigation bar with links for 'Applications', 'My Preferences', 'Print', and 'Help', along with a 'New Alerts' button. The main content area features a small chart icon and the title 'Nuclear Data Retrieval'. Below the title, there are tabs for 'Nucleonica/JEFF-3.1', 'EGAF Prompt Gammas', 'ICRP', and '8th Table of Isotopes'. A 'Select Database:' dropdown menu is set to 'Nucleonica'. Underneath, there are tabs for 'Nuclide Search', 'Radiation Search', and 'Advanced Search'. The 'Nuclide Search' tab is active, showing a search form titled 'Nuclide Search – Search Variables & Range'. This form includes input fields for 'Z:', 'Element:', 'Mass Number:', and 'Half-life' (with a unit dropdown set to 'Seconds'). There are also radio buttons for 'Stable' and 'Half-life', and a 'Decay Mode:' section with a checkbox for 'Isomers'. To the right of the search form is a 'Table print options' section with checkboxes for 'Decay mode', 'Half-life', 'Abundance', 'Spin', and 'Parity'. At the bottom of the search form, there is a row of checkboxes for various decay types: β^- , $\beta^- \beta^-$, $\beta^- \alpha$, $\beta^- n$, $\beta^- n \alpha$, and $\beta^- 2n$.

- 4) Nuclide search: spin and parity shall be displayed such as in the advanced search i.e. $\frac{1}{2} +$ and **not** 5.00E-01 1
- 5) Nuclide search: remove “-“ between “Z” and “Elements”
- 6) Nuclide search: the half-life sorting DOES NOT work.(see fig)
- 7) Nuclide search: sorting/ordering shall be done in all pages. Thus one can go to previous/next page and keep the ordering. At the present moment time, ordering is fine on the viewed page but when going to the next one the ordering is lost.
- 8) Nuclide search & Datasheet & Advanced Search & Nuclide Explorer:

We defined a primordial nuclide as followed:

Primordial \equiv half-life OR decay-mode AND abundance
which means that any nuclide which has a defined half-life ($T_{1/2} > 0$) in the DB **or** a decay mode (even with $T_{1/2} = -99$) **and** an abundance is then tagged as primordial. E.g. U238 is primordial (it has a defined half-life and an abundance), Ca40 is primordial (it has decay mode and abundance).

Nuclide Explorer/Karlsruhe: all primordial shall be drawn such as U238 i.e. with the upper part black and the lower part with its decay mode color

Search Nuclides & Advanced Search & Datasheet: for nuclides which are recognized as primordial – based on the previous definition- the “stable” label in the half-life field shall be replaced by “Stable/Primordial” when no half-life is available (i.e. $T_{1/2} = -99$).

- 9) Nuclide search & Advanced Search: Replace the “Stable” radiobutton label by “Stable/Primordial”. Selecting this option shall lead to displayed nuclides with “Stable” ($T_{1/2} = -99$ and not verifying the primordial definition, e.g. Bi209), “Stable/Primordial” ($T_{1/2} = -99$ and having abundance, e.g. Ca40) and “ $T_{1/2}$ ” (nuclides with $T_{1/2} > 0$ and abundance i.e. U238).
- 10) Nuclide search & Advanced Search: Move the isomers checkbox above the “Decay Mode”
- 11) Nuclide search & Advanced Search: add a check box to the label “Decay Mode”. Checking this checkbox will enable (make appearing) the decay mode filter box and activate the filter options. If unchecked, there will be no decay mode filtering i.e. all decay mode will be allowed.
- 12) All Searchable DB: all halflife shall be given with regular unit i.e. “1 Py” shall be given as “1E15 y” and “1 as” shall be given as “1E-18 s” (Raymond will change the string field in the database).
- 13) Nuclide Search: in addition to the number of results, the number of distinct found nuclide shall be added on top of the result table e.g. "number of nuclides ="
- 14) Nuclide Search: replace “All EC” in the decay mode filter by “All ec”.
- 15) Radiation Search: wrong format for the given gamma/alpha line energies. Do not format those energies in scientific format but leave them as they appear in the DB.
- 16) Radiation Search/Input box for the energy: if gamma is selected then the energy unit shall be “keV”, if alpha is selected then the energy unit shall be “MeV” (be careful then when making the request in the DB (all energy given in eV).
- 17) Radiation Search/Input box for the energy: add two extra input for energy so the user can make cross-search with a maximum of three energy lines (AND command).
- 18) Radiation Search: in result table replace “Intensity” label by “Emission probability”
- 19) Advanced Search: for the “Specific Activity”, “Specific gamma dose rate”, “Spontaneous fission rate” and “Isotopic power”, inputs shall be given as a range – i.e. minimum and maximum values – instead of value \pm .
- 20) Advanced Search: replace “Bg/g” by “Bq/g”
- 21) Advanced Search: replace “ $\mu\text{Sv}/\text{MBq.h}$ ” by “ $\mu\text{Sv}/(\text{MBq.h})$ ”
- 22) Advanced Search: remove the fields “Gamma rays” and “Intensity” from the results table – those fields have nothing to do with the actual search.
- 23) Searchable DB: when changing Search (i.e. from “Nuclide Search” to “Radiation Search”, the result table shall be cleared.

- 24) Advanced Search: the advanced search shall not be available for free users.
- 25) In the Decay mode box the All alpha box is not working. Also not in the nuclide explorer.

Portal:

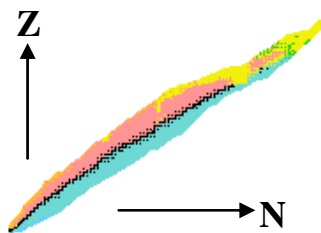
- 26) Search/Documentation: Replace “Center” by “Centre”
- 27) Replace “Search Portal” by “Search Nucleonica Documentation”
- 28) Search: for free user the Search/Documentation shall be enabled but only the “Search help” enabled, all other search options shall be disabled (for free users).
- 29) Replace in Knowledge Centre “Article database” by “Reading room”. In addition, in the Wiki the category “Articles” shall be changed to “Reading Room”.
Please inform us also how this can be done without losing data
- 30) Access to the Wiki from new icon on the left: a new window shall be open.
- 31) Wiki: replace the “nuclear” Logo in the Wiki main page with a Nucleonica logo.
- 32) Wiki: rename the “Forum” page by “Ask an Expert”. Please give us procedure to do so without any risk of deleting the existing pages.
- 33) Replace Searchable Databases with Nuclear Data Retrieval

Datasheet/Reference Data

- 34) Reference data/print selected output: in one wants to add something to the final outputs after its generations (e.g. a graph), one needs has to reload manually the page after generation of the data or the graph in the corresponding tabulation. The re-load of the print page shall be automatic.
- 35) Datasheet/Radiations: replace for Beta-Rays “Energy, E(keV)” by “End point, E(keV)”. It shall be done for both beta- and beta+ radiations (please note that the energy unit is keV (in the present version for the beta- radiation it is written MeV).
- 36) Datasheet/Radiations: when selecting a new nuclide within the use of the radiation module, the previously selected library shall remain.
- 37) Datasheet/Radiations: no value in the branching **shall not** be indicated with zero!
To be discussed.

Nuclide Explorer

- 38) Nuclide Explorer: “Change background” shall be enabled for free users. Default remains grey. No save allowed.
- 39) Nuclide Explorer: when only IT nuclides are selected nothing is displayed in the small chart. This is wrong.
- 40) Nuclide Explorer: text in the filer decay box shall be closer to the checkboxes, such as in the searchable databases.
- 41) Nuclide Explorer: Previous bug still exists. When changing the size of the browser window, then using the browser cursors and trying to select a nuclide, the chart doesn’t reacts anymore
- 42) Nuclide Explorer. Numbers of nuclides still incorrect. To be corrected based on Raymond’s comments sent to Dialogika on the 25/06/07.
- 43) Nuclide Explorer: In the big chart, with mouse over the Z-Element-A shall be displayed such as in Nuclides.net.
- 44) Nuclide Explorer: add to the small chart axis such as in the following sketch



- 45) Nuclide Explorer/Decay mode filter: “show all alpha” ain’t working.
- 46) Nuclide Explorer/Decay mode filter: “show none” → wrong number of nuclides.
- 47) Mac use/ Nuclide Explorer: no menu appears when right clicking on the chart or on a specific nuclide. This problem appears as well in Mozilla (tested under MacOSX).

General

- 48) All tables (and in particular for the administration/users/date of registration): the ordering shall be in descending order i.e. the highest/latest on top.
- 49) All tables: when data are presented on several pages, ordering shall be done on all values and not only for the values of the displayed page. In addition, when going to the previous or next page the chosen order shall be keep and not going back to default ordering.

Administration

- 50) Alerts: free user alert still not working.
- 51) Administration: do we need to have the UserID editable?
- 52) Forum maintenance: edit a category leads to a server error.
- 53) Administration: the RDD module option shall be activated through a check-box not being a new group of user. All groups of user shall be able to access the RDD module if allowed in their profile. In the present configuration a platinum user cannot access the RDD module (only freeRDD or administrator). An “Options” frame shall be implemented in the user profile, where administrator can activate RDD module and further optional module to be implemented in the future. This “special module activation mode” is required.
- 54) User preferences: if the user check the email alert and save, it seems to be done but when coming back to the preferences, the email alert checkbox is always unchecked. Therefore the email alert ain’t functioning.

Calculator

- 55) Calculator: NaN problem remains. Example: $1E20 \rightarrow 1/x \rightarrow 1/x \rightarrow \text{NaN}$
- 56) Calculator: Constants shall be loaded from the DB. The same shall be implemented for the conversion factor (a new table shall be then created for the conversion factors in the DB).
- 57) Calculator: when value is input in scientific notation than result value shall be as well displayed in scientific notation.

58) Calculator: input 1E2..... Displayed: 100,000000...004

Upgrade:

- 1) Nuclide Explorer: if a user is downgraded to free, he shall have access only to the standard chart. At the present moment time, he keeps the last used chart theme. The only chart allowed for free users is the standard one.
- 2) Nuclide Mixture: if we try to make a dosimetry calculation using the results of a decay calculation, we get an overflow error. It seems to occur because some of the decay products from the decay run have 0 activity/mass. Those shall be automatically removed from the new created Nuclide Mixture. *Jean will investigate the problem.*

Fission Yields

- 3) Fission Yields: Fields are ordered as text string not numbers...thus ordering is non sense.
- 4) Fission Yields: Ordering shall be by default in descending order (see point 8 free users).
- 5) Fission Yields: user ordering is not kept when going to next page (see point 9 free users).
- 6) Fission Yields: ordering by half-life is wrong!
- 7) Fission Yields: label in default ordering (by cumulative yields" shall be highlighted.
- 8) Fission Yields/Compare/Library: ➔ server error!
- 9) Fission Yields: after displayed of data if the user goes back to the select page the library combo choice is back to default JEFF3.1. It shall remain to the previously selected in the session.
- 10) Fission Yields: Mass yield data: problem with download graph.
- 11) Fission Yields: Mass yield data: data shall be downloadable!
- 12) Fission Yields: remove JEF2.2 choice
- 13) Fission Yields: Replace "ENDF" by "ENDF-BVI"
- 14) Fission Yields: Replace "JENDL" by "JENDL-3.2"

WebKORIGEN:

- 15) The results table looks terrible. Use similar format as the original VB program shall be used: one table with two columns for the top nuclides (Nuclides and Results), one for the top elements (Elements and Results), and one for the totals. All columns shall have the ordering feature.
- 16) The icon shall be change to a "reactor" icon.
- 17) Why is there a refresh and reload of the page every time one changes tabs? It seems that there is one unnecessary reload.
- 18) More to come...